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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,328	04/01/2004	Qiang Ding	021288-001610	1133

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EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT	PAPER NUMBER
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1624

MAIL DATE	DELIVERY MODE
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06/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/817,328	Applicant(s) DING ET AL.	
	Examiner /Venkataraman Balasubramanian/	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6-12,17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,9,10 and 17 is/are rejected.
- 7) ☒ Claim(s) 7,8,11,12 and 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response, which included cancellation of claims 2-5, 13-16, 18 and amendment to claims 1, 6-10 and 20, filed on 2/26/2009, is made of record. Claims 1, 6-12, 17 and 19-21 are now pending. In view of applicants' response, all 112 second paragraph rejections made in the previous office action have been obviated. In view of applicants' response, particularly amendment to claims, prior art 102 and 103 rejections over Kiyama, Hoffmann and Yamanaka made in the previous office action have been obviated. However, the following prior art rejections made in the previous office action are maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 9, 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Cuccia et al., US 6,281,219 .

Cuccia et al. teaches several pyrimidine compounds useful as insecticides, which include instant compounds. See column 1, formula 1 and note the definition of various variable groups. Especially note the definition of phenyl-X₁, phenyl-X₂ and R¹ groups clearly overlaps with the definition of instant R¹, L-R³, R² and R⁴ groups and compounds taught by Cuccia et al. therefore include instant compounds. See column 2-17 for further details of the invention including the process of making which includes instant

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process. See column 18-23 for species of compounds, which include instant compounds.

This rejection is same as made previously. Applicants' traversal to overcome this rejection is not persuasive. Contrary to applicants' urging based on the amended claims and careful analysis prior art and its comparison with instant genus of compounds of formula I-A and I-B, the amended claims still overlap with the genus of compounds taught by Cuccia. While genus of compounds of formula IA due to applicants' amended no longer overlap with compounds of Cuccia, the genus of compound of formula I-B do include compounds taught by Cuccia. More specifically, when instant R^3 is C_{6-10} aryl- C_{0-4} alkyl the compounds taught by the prior art anticipate and render obvious the compounds of instant claims as noted above. Applicants have asserted that although substituents X_1 -aryl and X_2 -aryl on the pyrimidine ring in Cuccia occupy the positions that correspond to R^1 and $L-R^3$ in structure I-B, Cuccia does not teach that substituents R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} and R_{11} are hydroxy- C_{1-6} alkyl, phenyl, C_{3-8} heterocycloalkyl, $-X^3C(O)NR^8R^8$, $-X^3C(O)NR^8R^9$, $-X^3C(O)R^9$, $-X^3S(O)NR^8R^8$, $-X^3NR^8R^9$, $-X^3S(O)_2NR^8R^8$, $-X^3S(O)_2R^9$, $-X^3SNR^8R^8$, $-X^3ONR^8R^8$, $-X^3C(O)R^8$, $-X^3NR^8C(O)R^8$, $-X^3NR^8S(O)_2R^8$, $-X^3S(O)_2NR^8R^9$, $-X^3NR^8S(O)_2R^9$, $-X^3NR^8C(O)R^9$, $-X^3NR^8C(O)NR^8R^9$, $-X^3NR^8C(O)NR^8R^8$, $-NOR^8$, $-X^3NR^8OR^8$, $-X^3NR^8(CH_2)_{1-4}NR^8R^8$, $-X^3C(O)NR^8(CH_2)_{1-4}NR^8R^8$, $-X^3C(O)NR^8(CH_2)_{1-4}R^9$, $-X^3C(O)NR^8(CH_2)_{1-4}OR^9$, $-X^3O(CH_2)_{1-4}NR^8R^8$, $X^3C(O)NR^8(CH_2)_{1-4}OR^8$ and $X^3NR^8(CH_2)_{1-4}R^9$, the substituents that are recited for the aryl portion of the R^3 group in amended claim 1. This is not entirely correct. The substituents $X^3C(O)R^9$ clearly overlaps with alkoxycarbonyl of Cuccia when instant X^3

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is a bond and R^9 is alkoxy. Similarly, $X^3NR^8R^8$, $X^3NR^8R^9$ and $X^3NR^8(CH_2)_{1-4}R^9$, overlap with amino, alkylamino and dialkylamino taught by Cuccia.

Hence, this rejection is proper and is maintained.

Claims 1, 6, 9, 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood et al., US 6,306,866 .

Wood et al. teaches several pyrimidine compounds useful as insecticides, which include instant compounds. See column 3-4, formula 1A, IB and IB1 and note the definition of A-X, B, and R^1 groups. Especially note the definition of A-X, B, and R^1 groups clearly overlaps with the definition of instant the definition of R^1 , $L-R^3$, R^2 and R^4 groups and compounds taught by Wood et al. therefore include instant compounds. See entire document for further details of the invention. See column 6-14, especially Table I-III, for species of compounds, which include instant compounds.

This rejection is same as made previously. Applicants' traversal to overcome this rejection is not persuasive. Contrary to applicants' urging based on the amended claims and careful analysis prior art and its comparison with instant genus of compounds of formula I-A and I-B, the amended claims still overlap with the genus of compounds taught by Wood. While genus of compounds of formula IA or IB, do not overlap with compounds of Wood when $X=O$., the genus of compound of formula IA and IB do include compounds taught by Wood when $X=NR$ taught by Wood. Applicants have limited their analysis to $X=O$ in genus of compounds taught by Wood but have not addressed the genus of compounds taught by Wood with $X=NR$. Hence, this rejection is proper and is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 6, 9, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia et al., US 6,281,219.

Teachings of Cuccia et al. as discussed in the above 102 rejection is incorporated herein. Cuccia et al. teaches several pyrimidine compounds useful as insecticides, which include instant compounds. See column 1, formula 1 and note the definition of various variable groups. Especially note the definition of phenyl-X₁, phenyl-X₂ and R¹ groups clearly overlaps with the definition of instant R¹, L-R³, R² and R⁴ groups and compounds taught by Cuccia et al. therefore include instant compounds. See column 2-17 for further details of the invention including the process of making which include instant process. See column 18-23 for species of compounds, which include instant compounds.

Cuccia et al. differs from the instant claims in not exemplifying all compounds generically embraced in the formula I shown in column 1.

However, Cuccia et al. teaches equivalency of those compounds taught in examples 1-39 with those generically recited for compound of formula I in column 1.

Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds using the teachings of Cuccia et al and expect resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made previously. Applicants' traversal to overcome this rejection is not persuasive for reasons stated in the above 102 rejection. To repeat: contrary to applicants' urging based on the amended claims and careful analysis prior art and its comparison with instant genus of compounds of formula I-A and I-B, the amended claims still overlap with the genus of compounds taught by Cuccia. While genus of compounds of formula IA due to applicants' amended no longer overlap with compounds of Cuccia, the genus of compound of formula I-B do include compounds taught by Cuccia. More specifically, when instant R^3 is C_{6-10} aryl- C_{0-4} alkyl the compounds taught by the prior art anticipate and render obvious the compounds of instant claims as noted above. Applicants have asserted that although substituents X_1 -aryl and X_2 -aryl on the pyrimidine ring in Cuccia occupy the positions that correspond to R^1 and $L-R^3$ in structure I-B, Cuccia does not teach that substituents R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 , R_9 , R_{10} and R_{11} are hydroxy- C_{1-6} alkyl, phenyl, C_{3-8} heterocycloalkyl, $-X^3C(O)NR^8R^8$, $-X^3C(O)NR^8R^9$, $-X^3C(O)R^9$, $-X^3S(O)NR^8R^8$, $-X^3NR^8R^9$, $-X^3S(O)_2NR^8R^8$,

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-X³S(O)₂R⁹, -X³SNR⁸R⁸, -X³ONR⁸R⁸, -X³C(O)R⁸, -X³NR⁸C(O)R⁸, -X³NR⁸S(O)₂R⁸, -X³S(O)₂NR⁸R⁹, -X³NR⁸S(O)₂R⁹, -X³NR⁸C(O)R⁹, -X³NR⁸C(O)NR⁸R⁹, -X³NR⁸C(O)NR⁸R⁸, -NOR⁸, -X³NR⁸OR⁸, -X³NR⁸(CH₂)₁₋₄NR⁸R⁸, -X³C(O)NR⁸(CH₂)₁₋₄NR⁸R⁸, -X³C(O)NR⁸(CH₂)₁₋₄R⁹, -X³C(O)NR⁸(CH₂)₁₋₄OR⁹, -X³O(CH₂)₁₋₄NR⁸R⁸, X³C(O)NR⁸(CH₂)₁₋₄OR⁸ and X³NR⁸(CH₂)₁₋₄R⁹, the substituents that are recited for the aryl portion of the R³ group in amended claim 1. This is not entirely correct. The substituents X³C(O)R⁹ clearly overlaps with alkoxycarbonyl of Cuccia when instant X³ is a bond and R⁹ is alkoxy. Similarly, X³NR⁸R⁸, X³NR⁸R⁹ and X³NR⁸(CH₂)₁₋₄R⁹, overlap with amino, alkylamino and dialkylamino taught by Cuccia.

Hence, this rejection is proper and is maintained.

Claims 1, 6, 9, 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood et al., US 6,306,866.

Teachings of Wood et al. as discussed in the above 102 rejection is incorporated herein. Wood et al. teaches several pyrimidine compounds useful as insecticides, which include instant compounds. See column 3-4, formula 1A, IB and IB1 and note the definition of A-X, B, and R¹ groups. Especially note the definition of A-X, B, and R¹ groups clearly overlaps with the definition of instant the definition of R¹, L-R³, R² and R⁴ groups and compounds taught by Wood et al. therefore include instant compounds. See entire document for further details of the invention. See column 6-14, especially Table I-III, for species of compounds, which include instant compounds.

Wood et al. differs from the instant claims in not exemplifying all compounds generically embraced in the formula IA, IB and IB1 shown in column 3-4.

However, Wood et al. teaches equivalency of those compounds taught in examples 1-5 with those generically recited for compound of formula I in column 3-4.

Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds using the teachings of Wood et al and expect resulting compounds to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made previously. Applicants' traversal to overcome this rejection is not persuasive for reasons stated in the above 102 rejection. To repeat: contrary to applicants' urging based on the amended claims and careful analysis prior art and its comparison with instant genus of compounds of formula I-A and I-B, the amended claims still overlap with the genus of compounds taught by Wood. While genus of compounds of formula IA or IB, do not overlap with compounds of Wood when $X=O$, the genus of compound of formula IA and IB do include compounds taught by Wood when $X=NR$ taught by Wood. Applicants have limited their analysis to $X=O$ in genus of compounds taught by Wood but have not addressed the genus of compounds taught by Wood with $X=NR$.

Hence, this rejection is proper and is maintained.

Allowable Subject Matter

Claims 7, 8, 11, 12, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624